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PLANT A TREE
Where it counts!



USDA Forest Service
Northeastern Forest Experiment
Station

Northeastern Area
State and Private Forestry
NE-INF-90-90

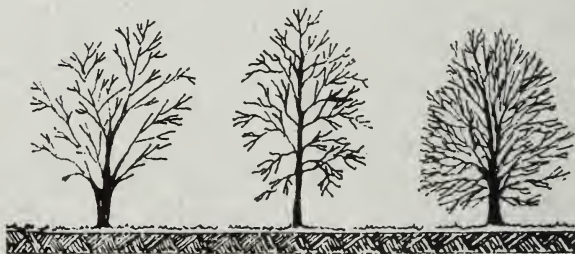
REDUCE ENERGY COSTS

The annual energy savings resulting from properly-placed plants around your home may be as high as 25%. Types of trees used and their locations in the yard depend on the area of the country you live in.

Plantings help cool your home in summer and may reduce heat loss in winter. In summer, trees and other plants absorb heat from the sun and cool residential areas by shading. During the winter, trees block cold winds. What follows are some guidelines for reducing energy costs while beautifying your home.

GENERAL CRITERIA FOR TREE SELECTION

- 1) Identify the purpose of the tree.
- 2) Consider tree shape. How fast will it grow? How tall will it grow? How far will the branches spread?
- 3) Consider tree character. Does the tree have a dense canopy (more summer shade) or a sparse canopy (less summer shade). Do branches have an open pattern (less winter shade) or a dense pattern (more winter shade)?



- 4) Consider tree maintenance. Is it easy to care for? Does the tree produce messy fruits?

SUMMER COOLING

Shade trees save costs for air conditioning a home in summer. If you don't air condition your home, shading from trees can mean the difference between bearable and unbearable temperatures.



- ◆ Plant tall trees (40-50 feet at maturity) 15 to 25 feet from the east and west sides of the house to shade roof and walls. Remove lower branches to allow summer breezes and winter sunlight to pass through.
- ◆ Shade your air conditioner to reduce its operational costs.

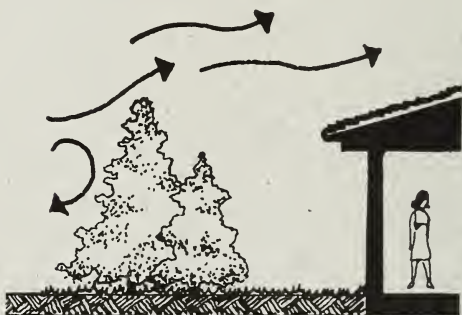


- ◆ Use ground covers and plantings for site cooling.
- ◆ Shade paved surfaces to reduce heat build-up. Compare the summer temperatures in the above diagram; temperatures are higher on sides without vegetation. In addition, more sunshine will be reflected into the house, making it warmer.

WINTER WARMING

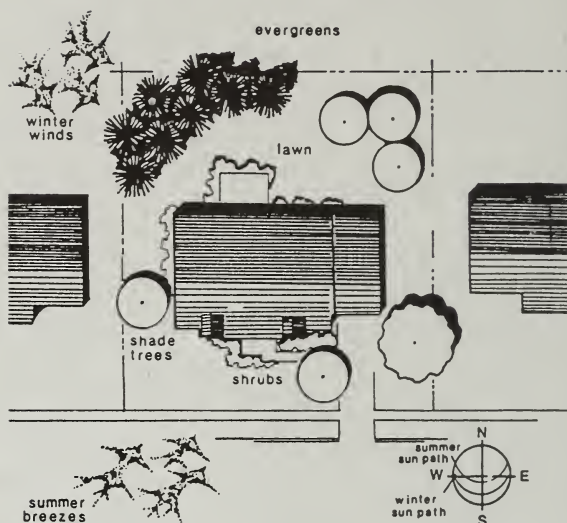
Drafts from leaky windows and poorly insulated walls make a house feel colder. Trees help reduce drafts by blocking cold winds.

- ◆ Trees should be planted along the north and west side of the yard or in the direction of prevailing winter winds.
- ◆ A row of evergreens, 25 feet from the house, will channel the wind away from your home. The spacing of trees will depend on the variety used.



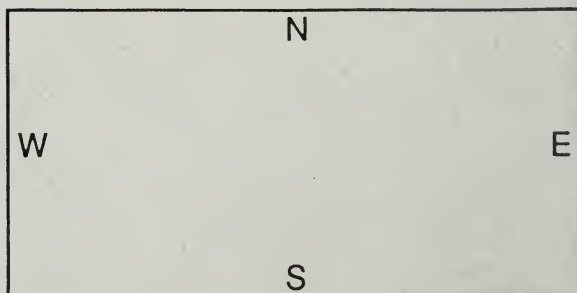
- ◆ With those homes needing a windbreak on the south side of the house, trees should be planted farther away to prevent winter shade.
- ◆ Single-row windbreaks are effective, but multiple rows (up to 5) are better.

PLANNED LANDSCAPE



PLANNING FOR YOUR HOME

- 1) To get started, sketch an outline of your house at the proper, north-south, orientation in the box below.
- 2) Locate existing trees and shrubs, and assess their usefulness in your plan. Determine available space for planting additional trees.
- 3) Identify your needs and apply the guidelines from this brochure.
- 4) Select trees that will satisfy conditions specific to your yard. Contact your local cooperative extension agent or favorite garden center for suggestions on the variety of tree to plant, planting, and care.



OTHER BENEFITS FROM PLANTING TREES

- ◆ **Less carbon dioxide** and more oxygen. Trees remove carbon dioxide and add oxygen to the air. (This will help decrease global carbon dioxide levels, and help reduce the "greenhouse effect".)
- ◆ **Clean air.** Trees remove dust and other pollutants from the air and make it healthier to breathe.
- ◆ **Clean water.** Trees and other plants reduce the amount of water flowing into the city's sewers, curbing the overflow at sewage treatment plants.
- ◆ **Property values.** Trees and other landscaping can increase property values 5 to 20%.
- ◆ **Privacy.** Trees screen unwanted views and noises.
- ◆ **Wildlife.** Trees provide food and shelter for birds and other animals.

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